The examiner rejected the appealed claims "as being unpatentable over the disclosure of Danly in view of * * * the French patent * * *." The examiner stated:

> No invention is seen to lie in replacing the *single acting* hydraulic device of Danly with a *double acting* hydraulic device as taught in the French patent. It is thought that one skilled in the art, having the Danly and French patents before him, would be able to intelligently combine the teachings of the two disclosure without any suggestion from applicant's disclosure.
>
> The two references applied in the rejection of claims 1-5 are thought applicable because Danly is an inching assembly for power presses, as is applicant's device; and the French patent (secondary reference) is concerned with clutches, not in the least foreign to applicant's problem.

The board affirmed the examiner, stating in part:

> We agree with appellant that the conception of an improvement must be considered along with the actual means of achieving the improvement, that in many cases the discovery of a problem is often an essential element in correcting such a problem. In this case, however, we believe that the problem was an obvious one; upon attempting to inch the press through a working stroke, the friction brake which is called on to function as a friction clutch has insufficient force to transmit the high torque whereupon slippage results. In our opinion, this problem would be apparent to a person having ordinary skill in the art.

After stating that the problem appears to be one in the clutch or brake field and that it would not be unobvious to seek the solution to the problem in the clutch or brake art, the board stated:

> The clutch art then, in our opinion, clearly teaches the use of a hydraulic operator to augment or add to spring force to engage, and to release the spring force for disengagement. We agree with the examiner that a person having only ordinary skill in the art, with the Danly and French devices or disclosures before him, would be able to incorporate the clutch teachings and structure of the French patent in the Danly clutch. The French patent clearly teaches means for increasing the spring pressure with which a movable clutch or brake plate clamps the disk.

The only issues to be determined by this court are (1) whether it is obvious to try to perform a metal forming operation while "inching" a power press by means of the Danly assembly; and (2) whether appellant's modification of the Danly assembly represents a patentable advance over Danly in view of the French patent to Kegresse.

[1] We agree with appellant that in determining the issue of unobviousness, the question whether the applicant conceived the basic idea is significant and should be considered along with the means of accomplishing the desired result.

However, this concept of forming a piece of metal as part of other testing and adjusting procedures was known in the power press art before the Danly apparatus was part of that art. Therefore, it is reasonable to assume that once the Danly "inching" apparatus was perfected, in the natural course of events, one skilled in the art would endeavor to stamp a piece of metal when using the Danly device during the "inching" process. The whole "inching" process was conceived and is used to prepare a power press for a series of normal stamping operations, and quite obviously test stamping a piece of metal would help to attain this goal. In any event, we do not believe that it would be unobvious for one skilled in the art to think of using the Danly device to stamp a piece of metal.

Further, we do not believe, in view of the Danly apparatus which discloses the basic concept and assembly for "inching" presses and which was adopted completely by appellant, that the added element of supplementing the spring force would be unobvious to one skilled in the art who observes that slippage occurs while endeavoring to stamp a piece of metal. We are of the opinion that the alleged problem of how to increase the pressure in the clutch action so that a piece of metal could be formed would obviously present itself as soon as the Danly apparatus was operated to this end and slippage occurred, if in fact it did occur. So we do not agree with this facet of appellant's argument that he not only solved the problem but discovered it as well. Likewise we disagree with appellant's position that the problem existed for a long time in the art without being solved and, therefore, his solution must have been unobvious to those skilled in the art. The record before us does not support this contention of appellant. The Danly "inching assembly" application was co-pending with the one at bar. Therefore, it is difficult for us to comprehend how the problem of slippage in the Danly device has been present for many years as claimed by appellant.

Furthermore, this concept which is stressed so much by appellant is not recited in any of the claims.

[2] So much for the concept itself. Now as to the combination recited in claim 1, the only element not disclosed by Danly is the means for increasing the clutching action during an "inching" operation. We find nothing unobvious or unexpected in the cooperation of the old Danly elements and this new one. Each element including the new one reacts as expected. Therefore, the combination is unpatentable. In re Smith, 34 CCPA 1007, 161 F.2d 274, 73 USPQ 394; In re Attwood, 45 CCPA 824, 253 F.2d 234, 117 USPQ 184. Whether it be a power press, an automobile or power tools, the reinforced clutching action would be the same and not unexpected. Merely because the primary purpose of the Danly spring element is to brake the power press, once the concept of using this element as a clutching device to "inch" the press has been revealed by Danly, there is no unexpected result in increasing the spring-caused clutching action by supplementing it with some other force such as hydraulic pressure so that a piece of metal can be stamped during the "inching" process.

The French patent teaches in so many words the very means appellant maintains he has discovered. The Kegresse specification states: "If the valve (6) is operated so that the oil penetrates the chamber (11) [2] the pressure of this oil is added to the pressure of the springs (18) in order to secure the engagement." To maintain that this patent is not pertinent here as appellant does, demonstrates the miscomprehension on his part as to the nature of his invention. His contribution lies in an improvement in the clutching action of the Danly patent and nothing more. Therefore, it would be obvious for one skilled in the clutch art, with the teachings of the French patent, to devise appellant's specific hydraulic pressure improvement.

In view of the above considerations, we see nothing patentable in the concept of performing a metal forming operations while inching a power press with the Danly assembly. We hold further that the combination of elements recited in claim 1 is not patentable over the combination disclosed by Danly in view of the disclosure of Kegresse.

Since appellant concedes that if claim 1 is considered unpatentable, claims 2-5 would be also, we will not discuss these claims. For the above reasons, we *affirm* the decision of the Board of Appeals.

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[2] The annular cylinder contained within the peripheral portions of the flywheel.

48 CCPA 1072

Court of Customs and Patent Appeals

In re DEAN

Appl. No. 6707 Decided July 7, 1961

PATENTS

1. Court of Customs and Patent Appeals —Issues determined—Ex parte patent cases (§ 28.203)

Court does not consider rejection reversed by Board.

2. Patentability—Invention—In general (§ 51.501)

Novelty alone is not enough to sustain patent, but it is not incumbent on applicant to establish existence of advantages or advantageous results over prior art with respect to his admittedly novel subject matter, since there is no such requirement in statutes.

3. Construction of specification and claims—By specification and drawings—In general (§ 22.251)

Claims are read in light of disclosure of specification, not in a vacuum.

4. Construction of specification and claims—In general (§ 22.01)

Words and phrases (§ 70.)

To state mere adaptability of parts of timer to perform coupling function does not import into claim the shutter to which they are coupled.

5. Construction of specification and claims—In general (§ 22.01)

Clause "to cause its associated electroresponsive device to complete an exposure" is nothing but a statement of what happens and imports no elements into claim.

6. Construction of specification and claims—In general (§ 22.01)

In construing instant claims, what controls is no legal "test" derived from different fact situation but common sense interpretation of language according to rules of grammar in context in which it occurs.

Particular patents—Camera

Dean, Camera Shutter-Timing Apparatus, claims 1 to 8 of application allowed.

Appeal from Board of Appeals of the Patent Office.

Application for patent of George J. Dean, Serial No. 340,571, filed Mar. 5, 1953; Patent Office Division 62. From decision rejecting claims 1 to 8, applicant appeals. Reversed.

LAURENCE B. DODDS, Little Neck, N.Y. (MILES D. PILLARS, Washington, D.C., of counsel) for appellant.

CLARENCE W. MOORE (D. KREIDER of counsel) for Commissioner of Patents.

Before WORLEY, Chief Judge, RICH, MARTIN, and SMITH, Associate Judges, and KIRKPATRICK, Judge.*

RICH, Judge.

This appeal is from the decision of the Patent Office Board of Appeals affirming the rejection of claims 1-8 of the application of George J. Dean, Ser. No. 340,571, filed March 5, 1953, for "Camera Shutter-Timing Apparatus." No claims are allowed.

The Invention Disclosed

The title is accurately descriptive of the contents of the specification, which refers to two other applications, It first states that Willcox application Ser. No. 125,453, filed Nov. 4, 1949, describes combined shutter and timing mechanism for an aerial camera wherein there are two sets of shutter blades, one normally open and one normally closed and held in those positions by latches. A photographic exposure is initiated by tripping the latch of the normally closed shutter which opens, setting in motion an adjustable cam which after a time interval of desired duration trips the latch of the normally open shutter to close it and terminate the exposure. It is said that this mechanical timer is not readily adjustable from a remote point and that its accuracy may be affected adversely by ambient conditions in an airplane in flight. The second application referred to is that of Doyle, Ser. No. 340,557, filed concurrently with this application and said to describe an "improved" shutter-actuating mechanism which can be operated from a point remote from the camera "and including timing apparatus which may be adjusted at the operator's station." The instant invention is said to be an "improved and simplified timing apparatus for use in the shutter-actuating mechanism of" the Doyle device, about which no further information is given.

Against this background, the application drawing discloses, in purely diagrammatic form, the circuitry of an electrical network adapted to be connected to a source of energy such as a 115 volt, 60 cycle current source. The operator-controlled portion of this network consists of two manually operated switches and an adjustable resistance. Its output or actuating portion consists of two electromagnets or solenoids "adapted to be individually coupled to the shutter-actuating elements A and B, respectively, as indicated by the dot-dash lines 12 and 13, respectively." No camera or shutter or shutter element is shown, the lines 12 and 13 simply being marked, "To shutter actuator A" and "To shutter actuator B." In practice, we understand, the two electromagnets which are part of the disclosed circuit are mounted on the camera shutter and connected by a three-wire electrical cable to the rest of the circuit and its controls, which may be at a point remote from the camera.

It will be understood that the timing of an exposure, that is to say whether it is a fiftieth of a second or a five-hundreth, is determined by the interval between the energization of the two electromagnets controlling the two shutter blades. As shown, actuator B is operated first and actuator A is automatically operated by the timer circuit at the desired interval thereafter.

The issues here do not require a detailed understanding of the circuitry. Suffice it to say that the solenoids for actuators A and B are in two distinct but interrelated circuits, each circuit being supplied with current from its own capacitor, the capacitors having first been charged from the current source and disconnected from the source when actuation of the shutter is initiated. When the operator moves a switch, the solenoid for actuator B receives an electrical pulse from the discharge of its related capacitor, moves its shutter element, and the current in this branch of the circuit drops to zero. When this happens, a thyratron tube in the circuit containing the solenoid for actuator A is rendered conductive, after a desired time interval which is determined by a time constant circuit, the interval depending on the operator's manual setting of the adjustable resistance. The thyratron circuit, acting as a time delay switch, permits current to flow through the electromagnet for actuator A from its associated capacitor whereupon it operates its related shutter element. Thus the exposure cycle is completed. By reconnecting the capacitors to the current source they are recharged and the timer is readied for another exposure.

To summarize, what is disclosed is an electrical timing circuit, to be attached, on the one hand, by electrical connections to a source of current and, on the other hand, by mechanical connections, to a pair of shutter blades in a camera.[1] The stated objects of the invention are to provide "camera shutter-timing apparatus." What is disclosed is camera shutter-timing apparatus. The opening paragraph of the specification states that "while it is of general application, it is particularly suitable for use with aerial cameras located in a position in the plane remote from the photographer." After discussion of background, it is stated: "The present invention comprises an improved and simplified timing apparatus p a r t i c u l a r l y suitable *for use in* the shutter-actuating mechanism of the said copending Doyle application." [Emphasis ours.]

What appellant wants to protect by patent is camera shutter-timing apparatus as disclosed in the specification.

The Claims

The differences in the claims appear to be immaterial to the issues here and we may consider claim 3, which the parties have used in the proceedings below, to typify all of them. It reads:

> In a camera having a shutter mechanism including two independently operable shutter-actuating elements, a shutter-timing apparatus for effecting a precisely predetermined camera exposure comprising: [1] a pair of electro-responsive devices adapted to be individually coupled to said elements; [2] an alternating-current supply circuit; [3] a pair of rectifier circuits coupled to said supply circuit, each including an energy-storage condenser; [4] a pair of control circuits individually coupled to said condensers each including one of said devices; [5] means for developing an electrical pulse in one of said control circuits to cause its associated device to initiate an exposure; [6] a normally non-conductive electron discharge device included in the other of said control circuits; [7] and an electrical time-constant circuit responsive to operation of said pulse-developing means for rendering said discharge device conductive to develop a delayed pulse in said other of said control circuits to cause its associated electro-responsive device to complete an exposure.

We have inserted the numbers in brackets to designate the clauses describing the elements of the combination which is claimed and to facilitate the ensuing consideration.

The references relied on are:

Lee, 2,577,774, Dec. 11, 1951
Watson (British), 553,949, June 11, 1943

The examiner rejected on four separately specified and considered grounds, summarized by the board as follows:

> The claims at bar have been rejected upon each of four grounds, (1) as based upon an insufficient disclosure, (2) "as failing to particularly point out the invention", (3) as unpatentable over the prior art, on the basis of Watson alone or as a primary reference in conjunction with Lee in secondary aspect, and (4) as drawn to an old combination of "a shutter having two independently operable actuating elements, a pair of electro-responsive devices coupled to said elements and a timing circuit" for operating said devices, alleged to be shown in Watson.

[1] The board reversed rejection (1), insufficient disclosure, so we shall not consider it.

As to grounds (2), (3), and (4), the board said they all involved "as a material factor * * * the question of whether the claims on appeal are drawn merely to a timer instrumentality per se or to a *combination with said timer of the shutter mechanism* * * * referred to in the preamble of each of said claims." [Emphasis ours.]

As to rejection (2), failure to particularly point out the invention, as required by 35 U.S.C. 112, the board said that it presented, "fundamentally, the same question as to the patentability status of the claims" as the rejection on prior art and that "treatment on the latter ground would suffice."

As to rejection (4), that the claims are drawn to an "old combination," the board said it was, "in effect, merely a restatement of the prior art rejection."

With this analysis, by which the examiner's three separately considered rejections were in effect combined into a single problem for consideration, the board then proceeded to a discussion of the rejection on prior art, rejection (3).

The first conclusion reached by the board was that "the claims at bar are each drawn to a combination as alleged by the examiner," and that combination, as recited in the passage above quoted

* United States Senior Judge for the Eastern District of Pennsylvania, designated to participate in place of Judge O'CONNELL, pursuant to provisions of Section 294(d), Title 28, United States Code.

[1] What we have termed the "output" of the timing circuit is shown in the drawing as a pair of "electromagnets 10, 11, adapted to be individually coupled to the shutter-actuating elements A and B, respectively, as indicated by the dot-dash lines 12 and 13, respectively." The shutter-actuating elements are not shown. The electromagnets, which we have also termed solenoids, are shown as comprising magnet coils and associated armatures, the latter being mechanical elements moved upon energization of the magnets. It is obvious that the connections between the armatures and the shutter actuators is a mechanical connection of some kind which forms no part of the invention as it is described in the application. The disclosure thus carries the timer right up to, but does not include, the shutter on the camera, by which the actual exposure is made under the control of the timer.

setting forth the rejections, is (and we quote it directly from the examiner's Answer): "the combination *of a shutter* having two independently operable actuating elements, *a pair of electro-responsive devices* coupled to said elements[,] *and a timing circuit* to provide separate timed pulses to the electro-responsive devices to initiate and to complete an exposure shown to be old in Watson." [Emphasis ours.]

It is true that *that* combination is disclosed by Watson, but it will be observed that all *details* of appellant's *timer*, as set forth in his claims, are being ignored. The "timing circuit" is separated from the two "electro-responsive devices" which are a part of it and treated as a single element.

Taking up the rejection on prior art, the board said (our emphasis):

> * * * it is apparent that Watson presents the same *over-all* combination of *basic* components as it is *included* in the claims on appeal, and that these components are related to each other and cooperate in the same *general* way as in the claimed arrangement to produce merely equivalent combinational results. While it may be that *Watson does not disclose a timer identically as claimed*, and in this respect *we fail to see that Lee would supply the deficiency since this reference does not show circuitry* including rectifiers and condensers in the same relationship *as called for*, we do not regard this to be signicant insofar as the patentability of the claims on appeal is concerned. *Although there may be novelty here in the timer* component, it is well settled that mere novelty alone is not a sufficient basis upon which to predicate patentability. * * * [authority cited]. * * * In the instant situation, it has neither been argued by appellant nor established *that the novelty* in the timer component would produce any advantages or results, in respect to the combination, over those attributable to the normal operation of the Watson arrangement, and it is not apparent that any such advantageous results would accrue as to the combination merely because of *the difference in the timer*. Accordingly, it can only be concluded that claims 1 to 8 are unpatentable over the prior art, and we will therefore sustain the rejection.

[2] In view of the way in which the board combined its consideration of the three grounds of rejection designated (2), (3), and (4), it is evident that it sustained all of them, but on what precise ground is not too clear. We agree that novelty alone is not enough to sustain a patent. We do not agree that it was incumbent on the appellant to establish the existence of "advantages" or "advantageous results" over the prior art with respect to his admittedly novel subject matter, since there is no such requirement in the statutes. We think that in the interest of clarity the best thing for us to do is to go back to the examiner's more precisely stated grounds of rejection, unscramble their consideration, and deal with them separately, assuming each of them to have been affirmed by the board, except ground (1) which was specifically reversed.

We shall start with ground (2), the section 112 rejection, failure to particularly point out the invention. The examiner said in his final rejection that any improvement made by appellant resided in the timer per se. We agree. The appellant agrees. But, said the examiner, the claims are not directed to a timer, but to "a combination of shutter and timer and therefore fail to particularly point out applicant's contribution (the timer per se.)." In his Answer, the examiner further explained his position by saying that the claims "include reference to initiating and completing an exposure, which is a function of a camera shutter not of a timer. * * * The inclusion of the reference to a shutter and to the initiating and completing of an exposure is therefore considered to confuse rather than to particularly point out and distinctly claim the subject matter which applicant regards as his invention * * *." The board relied on the same statements, putting particular emphasis on the reference to the initiation of an exposure, which is to be found in clause [5] of claim 3, supra.

Claim Construction

We find ourselves in complete disagreement with the examiner and the board on the interpretation of the claims, which has become the central issue in this case. While the mutually accepted illustrative claim seems to us to be so clearly a claim to a combination of elements constituting merely a timer as to speak for itself, we shall state our reasons.

[3] The preamble, which is all that portion at the beginning of the claim preceding the colon, we regard as the equivalent of "Shutter-timing apparatus comprising:." This timing apparatus, according to the disclosure of the specification,—and the claims are to be read in the light thereof, not in a vacuum—is designed *for use with* a particular kind of old shutter having two independently operable blades, wherein the opening of one initiates the exposure and the closing of the other completes it. The function of the timer is to precisely time such a

shutter. All this preamble does, considered as a unit, is to set forth this environment for the timing apparatus which is about to be described in the seven clauses which follow "comprising:." To assure that there is no doubt about what we mean, we point out that the compound adjective "shutter-timing," modifying the noun "apparatus," means timing apparatus *for* a shutter, not a combination of shutter and timing apparatus.

[4] In clause [1] the board, but not the examiner, referred to the words "adapted to be individually coupled to said [shutter-actuating] elements" as tending to make the claim define as the invention a combination of timer with shutter. We do not so construe the clause. The whole timer must be "adapted" to be coupled to a shutter else it cannot perform its intended function. It is coupled thereto through the electro-responsive devices, mechanically, when in use. To state mere *adaptability* of these parts of the timer to perform the coupling function does not import into the claim the shutter to which they are coupled. The above clause is a limitation of element [1] but not an inclusion of shutter elements.

The Patent Office next relies on the words in clause [5], "to cause its associated device to initiate an exposure."[2] The element positively set forth in [5] is "means for developing an electrical pulse in one of said control circuits." That "means" consists of the capacitor or condenser in the circuit, which carries the charge to create the pulse, plus a manually operated switch which shorts out resistance to permit the capacitor to discharge rapidly through the circuit. The clause relied on is not a direct modifier of the word "means" but merely a statement of the *reason* why the pulse is developed at all, a statement which, together with the preamble, we think improves the clarity of the definition of elements of the timer, and nothing more.

[5] Finally reliance is placed on the words in clause [7], "to cause its associated electro-responsive device to complete an exposure." We read clause [7] as positively including in the claim only an electrical time-constant circuit, responsive to the operation of the pulse-developing means of clause [5], for rendering the discharge device of clause [6] conductive so as to develop the pulse in the second control circuit. That second circuit contains the thyratron and the time-constant circuit consists of a capacitor and resistor in the thyratron grid circuit cooperating with the variable resistor by which timing is adjusted. After the pulse in the first circuit has died out, the two resistors aforesaid leak off the negative bias on the thyratron grid and it becomes conductive, permitting the second pulse to go through. The clause relied on is nothing but a statement of what happens when it does go through and in no way imports any elements into the claim.

Our construction of the claims, therefore, leads to the conclusion that they define a combination of electrical, electronic, and electro-mechanical components in a timer only and exclude camera or camera shutter parts. As such they particularly point out what appellant describes in his specification as his invention, a timer per se. The section 112 rejection was therefore improper and must be reversed.

In support of its construction of the claims, the board cites Kropa v. Robie et al., 38 CCPA 858, 187 F.2d 150, 88 USPQ 478, saying that the various tests embraced in that case "clearly indicate that in the claims here on appeal the preambles thereof must be regarded as *limiting* in nature, to give to such claims a *combination status*." [Emphasis ours.]

Of course, the claims before us are combination claims in any event, the question being *what* combination is set forth. We therefore take the board's statement to mean not that the preambles *give* combination status broadly but cause the claims to define a combination of a timer with shutter elements instead of a just a timer. For the reasons stated above, we cannot agree with that construction.

We have reviewed the Kropa case and we are not aware that it sets forth any "tests." It was an interference involving counts copied from a patent directed to "An abrasive article comprising" abrasive grains and a particular resinous

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[2] In its decision on rehearing, limited to the question of what the claims are drawn to, the board said of this clause [5]:

> In our estimation, as we denoted in our decision, such clause, even apart from the other matters herein involved, would clearly affirmatively embrace and constitute a positive recitation of the shutter mechanism with its shutter-actuating elements mentioned in the claims, and in such sense be definitive in and of itself of a claiming of the combination concerned. [i.e. shutter plus timer.]

We can see some sense in this conclusion only if one reads the clause as calling for means to initiate an exposure. Even then, a solenoid could *initiate* an exposure by moving some other element and would not necessarily import that other element into the claim. But the clause is not for means to initiate exposure, it is for means to develop an electrical pulse, in an electrical timing circuit.

binder (and method of making the same involving the same issues). The applicant who copied them disclosed the mixture of ingredients but not in abrasive articles and argued disclosure in early applications on the basis that "An abrasive article" was not a limitation of the counts. The court reviewed and tabulated some 37 cases wherein the limiting effect of preambles or the like was considered, commenting on what it found in those cases, but we are unable to find that it undertook to set forth any tests. It held on the issue before it—and therein is to be found the only "controlling" aspect of the case—that the words "An abrasive article" were "a vital term of the counts" which gave them "life and meaning," for which reason they constituted a limitation. We see no resemblance of the problem in that case to the issue in this case. If any comparison is to be made, we would say that the vital words in the preamble of the claims at bar, which give it life and meaning, are "shutter-timing apparatus * * * comprising." If all other words of the preamble were omitted, together with the other phrases the board relied on, namely, "adapted to be individually coupled to said elements" in [1], "to cause its associated device to initiate an exposure" in [5], and "to cause its associated electro-responsive device to complete an exposure" in [7], the claim would beyond question define only the timer. The permissive use of the added environmental language just mentioned does not [6] change the situation. What controls here is no legal "test" derived from some different fact situation but common sense interpretation of language according to the rules of grammar in the context in which it occurs.

On rehearing, the board bolstered its position by further citation of one of the 37 cases considered in Kropa v. Robie et al., In re Fawick, 19 CCPA 1124, 56 F.2d 873, 13 USPQ 92, which, it said, "would seem to be clearly controlling here and definitive of our view." In the Kropa tabulation this case was listed as an ex parte case "in which the preamble either expressly or by necessary implication was considered to be a limitation" but was footnoted with the word "Semble." The tabulators were not sure what it stood for. On reviewing it, neither are we. The board refers to the discussion therein of claim 17. The application was for reissue. Claim 17, as appears in the opinion of the dissenting judge who thought it was allowable, opened with the words "In an automotive vehicle having a spring supported frame." The balance of the claim does not appear in the opinion. The whole of the majority opinion relevant here reads (13 USPQ at 94):

> Claim 17 was rejected by the Patent Office tribunals because appellant's drawings did not show the structure defined therein * * * It is not denied that a drawing is required by law. Rule 71 of the Rules of Practice of the United States Patent Office provides for an amendment of the drawings to secure "correspondence between the claim, the specification, and the drawing." Although appellant has had the opportunity to comply with the statute and rule 71, he has not done so. The claim, therefore, was properly rejected.

The dissenting opinion shows that the examiner's objection was that the drawing showed no spring support for the frame. It also points out that the *allowed* claims referred to structural elements not shown in the drawings. Apparently the Patent Office solicitor characterized the ground of rejection of claim 17 as "minor and formal." We cannot find in this case any "controlling" authority nor can we see clearly the view of which it is "definitive."

Finally so far as precedent goes, the solicitor's brief herein frankly admits that the Kropa case "did not deal with the precise question of whether elements recited in a preamble constitute elements of a claimed combination" and goes on to refer to three cases dealing with the point that novelty in or patentability of *one element* of a combination does not necessarily produce a new and patentable combination. Conceding that point of law, it has no bearing at all here except on the basis of an assumption that the timer, set forth in the claims as a combination of seven elements or so, is in fact and law but a single element. One of the cases is quoted from as setting forth a "test" but it is so far afield, in view of our construction of the claims, as not to merit discussion.

Old Combination

This rejection, ground (4), falls automatically on the basis of the foregoing analysis since it was predicated on an interpretation of the claims according to which they define the invention as a combination of a pair of shutter elements, a pair of electroresponsive devices and a timing circuit. Though that combination is old, that is not what is claimed. We turn to the rejection on prior art.

Prior Art Rejection

The Watson patent discloses a camera for copying documents with the general type of two blade shutter we have been discussing. The blades of the shutter are latched in their initial positions and the latches are tripped in sequence by electro-responsive devices, the time interval being under the control of a timer. The total disclosure in this reference as to what this timer is consists of a drawing containing a rectangle marked "TIMER," the statement that this is "electrical timing apparatus" which "embodies a delay-action device which operates, after a selectively controlled interval, to close a circuit 135 which includes the second release or shutter-closing coil," and a statement that as the details of the timer are no part of the invention, they are not described. It is then stated that a clockwork escapement timer may be used instead of an electrical timing mechanism. Thus it may truly be said that Watson, in the board's words, "does not disclose a timer identically as claimed." We would go further and say that Watson tells no more than what his timer must do and that it may be either electrical or mechanical. As a disclosure of details of an electric timer circuit, Watson is almost a nullity.

Lee comes closer in that it discloses in detail the circuitry of an electrical "Automatic Exposure Timer for Cameras." It is an involved circuit containing three vacuum tube rectifiers, five other vacuum tubes, two voltage regulator tubes, a photo-electric tube, three double-pole vacuum tube controlled relays, and three solenoids. It is an automatic timing device in a microfilm camera for regulating exposure automatically in accordance with the light on the subject, or reflected from it. It acts on a single blade shutter and also controls the film advance mechanism.

The use made of Lee by the examiner was always on the assumption that the claims are directed to a combination of shutter mechanism and an electrical timer. He said that Lee showed an electronic timer control circuit and that there would be "no invention" in substituting it in the Watson combination; that "*In relationship to the shutter and its actuating elements*, the timing circuit of Lee is considered as the equivalent of the timing circuit recited [in the claims]." [Our emphasis.] In his Answer he went into more detail but still proceeded on the premise that "at least in relationship to a camera shutter" the timing circuit of Lee "is the equivalent of the time circuit recited in claim 3." The board, when it came to consider Lee, said, in effect, that this reference *does not show circuitry in the relationship called for by appellant's claims*. But the board also said that in the view it took it did not regard this to be significant "insofar as the patentability of the claims on appeal is concerned."

The prior art rejection before us is on Watson alone or with Lee. Watson alone utterly fails to negate patentability of the claims and was applied on a wrong construction as to what they define. The rejection on Watson in view of Lee is predicated on the same mistaken construction and supported by the board only on the basis, as we understand it, of there being nothing patentable in substituting Lee's timer (or any other electric timer, including appellant's) in Watson's combination of shutter and electro-responsive devices and timer, "merely because of the difference in the timer." We consider neither of these rejections on the references to be tenable.

Conclusion

All rejections affirmed by the board, namely, (2) failure to particularly point out the invention, (3) non-patentability over the prior art, and (4) "old combination" as specified are *reversed*.

Patent Office Board of Appeals

Ex parte ROSENFELD
Patent issued June 6, 1961
Opinion dated Feb. 1, 1961

PATENTS

1. Patentability — Anticipation — Modifying references (§ 51.217)

References are improperly combined inasmuch as examiner's proposed modification of one reference is directly contrary to specific limitation in reference and would render device of reference unsatisfactory for its intended purpose; one skilled in art would not modify such device to make it unsuitable for its intended purpose.

Particular patents—Ashtray

2,987,619, Rosenfeld, Luminescent Ashtray and Coaster, claims 8 to 11 of application allowed.

Appeal from Division 54.

Application for patent of Morton M. Rosenfeld, Serial No. 723,522, filed Mar. 24, 1953. From decision rejecting claims 8 to 11, applicant appeals. Reversed.

ARTHUR H. SEIDEL (EDWARD C. GONDA of counsel) both of Philadephia, Pa., for applicant.

Before FRIEDMAN, KREEK, and KEELY, Examiners in Chief.

KEELY, Examiner in Chief.

This is an appeal from the final rejection of claims 8 through 11, all of